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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/761,752

01/20/2004

W. Dale Hopkins

200308860-1

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10/04/2005

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

LEE, SEUNG H

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/761,752

Applicant(s)

HOPKINS, W. DALE

Examiner

Seung H. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-35 is/are allowed.
- 6) ☒ Claim(s) 1,7,10-15,36 and 37 is/are rejected.
- 7) ☒ Claim(s) 2-6,8 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/20/2004.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 11-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 11, line 3: The phase "an entered PIN" is unclear to the Examiner, that is, what is the entered PIN? Does the entered PIN' differ with an entered PIN as recited in the claim 1?

Appropriate clarification is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 7, 10, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dickson (US 6,736,313) in view of Morris (US 6,460,138).

Dickson teaches an off-line transaction system comprising a smart card reader (130) for accessing information stored in the smart card (202) wherein a user enter a PIN for authenticating transaction in which the PIN is encrypted and decrypted during

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authentication process via a network, the transaction is occurred using the smart card after the positive result of verifying the entered PIN wherein such conducting transaction serves as unlocking the smart card, the PIN can be verified in the smart card using the on-card verification means, the system also comprises a plurality of servers/hosts , card readers, smart cards with processors for conducting transactions, i.e., each and every user can use a different smart card for different transaction (not shown) (see figs. 1-8; Abstract; col. 4, line 8-col. 9, line 40).

However, Dickson fails to particularly teach that the method generate signature on the entered PIN.

Morris teaches a portable electronic device wherein a user is authenticated using the PIN number and asymmetrical cryptography in which the digital signature (140) is generated by encrypting the PIN and private key, the private key also serves as a unique secret key issued by card issuer (not shown) (see figs. 2-4; col. 3, line 54- col. 5, line 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Morris to the teachings of Dickson in order to increase security by encrypting PIN and private key for authenticating particular user for conducting off-line transaction.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dickson as modified by Morris as applied to claim 1 above, and further in view of Chaum (US 4,926,480).

The teachings of Dickson/Morris have been discussed above/

Although, Dickson/Morris teaches the off-line transaction system for conducting transactions using the PIN and digital signature, they fail to particularly teach that the RSA key is used.

However, Chaum teaches that the digital signature is encrypted/decrypted using the private key with RSA cryptography (see figs. 2-4; col. 18, line 24- col. 22, line 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Chaum to the teachings of Dickson/Morris in order to provide an alternative cryptographic method for encrypting/decrypting information therewith.

Additional Remarks

6. The lack of an art rejection with this Office action is not an indication of allowable subject matter (i.e., even though the claims 11-14 are rewritten or amended to overcome the rejection under 35 U.S.C. 112 as discussed above). The disclosure/claimed language is such that it is impractical to conduct a reasonable search of the prior art by the Examiner.

Allowable Subject Matter

7. Claims 16-35 are allowed.

8. Claims 2-6, 8, and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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9. The following is a statement of reasons for the indication of allowable subject matter:

Although, the best prior art of record to Dickson, Morris, and Chaum teaches that the off-line transaction system utilize the smart card for conducting transactions by generating digital signature with the entered PIN and private key using RSA cryptography, however, Dickson, Morris, and Chaum taken alone or in combination of other references, fail to specifically teach or fairly suggest that a data security system comprises a smart card for off-line transaction having an interface for communicating with an off-line terminal and an enrollment system, the enrollment system having a processor for initializing and personalizing a smart card by generating a unique secret key using a card issuer private key and generating signature on an entered PIN using the unique secret key as set forth in the claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Audebert (US 6,694,436) discloses a terminal and system for conducting secure electric transaction having the smart card storing the private key.


Asokan et al. ("The state of the art in electronic payment systems") discloses an electronic payment system.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seung H. Lee whose telephone number is (571) 272-2401. The examiner can normally be reached on Monday-Friday, 7:30 AM- 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on (571) 272-2398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Seung H. Lee

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September 27, 2005